



PATENT APPLICATION

IN THE U.S. PATENT AND TRADEMARK OFFICE

January 24, 2006

Applicants: Junzo SUNAMOTO et al

For: COSMETIC PRODUCT CONTAINING
POLYSACCHARIDE-STEROL DERIVATIVE

Serial No.: 09/936 953 Group: 1617

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Atty. Docket No.: Yanagihara 62

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' BRIEF ON APPEAL

Sir:

This is an appeal from the decision of the Examiner dated September 29, 2005 finally rejecting Claims 1, 4, 5 and 8-12.

REAL PARTIES IN INTEREST

NOF Corporation and Junzo SUNAMOTO are the assignees of the present application and the real parties in interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences to the present application.

STATUS OF CLAIMS

Claims 1, 4, 5 and 8-12 are pending and are the claims on appeal. Claims 2, 3, 6 and 7 have been canceled.

STATUS OF AMENDMENTS

The Request for Reconsideration, filed August 3, 2005, was not entered by the Examiner.

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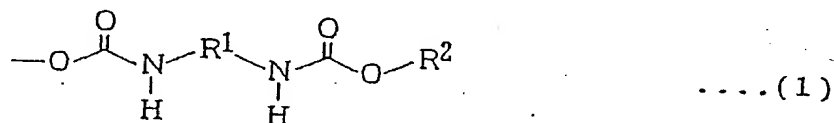
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SUMMARY OF CLAIMED SUBJECT MATTER

Appellants' invention, as defined by independent Claim 1, is directed to a cosmetic product comprising 99.999-50 wt.% of cosmetic components, a solvent containing at least one of a volatile oil and a volatile organic solvent and 0.001-50 wt.% of a pullulan-cholesterol derivative formed by substituting the hydroxyl groups of mono-saccharide units constituting the pullulan of the pullulan-cholesterol derivative, in a proportion of 0.01 to 20 groups per 100 monosaccharide units, by a radical represented by the formula (1)



in which R¹ denotes a hydrocarbon group containing 1-10 carbon atoms and R² represents a cholesteryl group (original specification page 5, lines 11-20 and paragraphs [0062] and [00102] in the "clean" copy of the substitute specification).

Claim 4 limits Claim 1 in requiring that the proportion of cholesteryl groups introduced by substitution to the hydroxyl groups of the monosaccharide units of pullulan is 0.05 to 15 groups per 100 monosaccharide units (specification page 5, lines 21-24).

Claim 5 limits Claim 1 in requiring that the proportion of cholesteryl groups introduced by substitution for the hydroxyl groups of the monosaccharide units of the pullulan is 0.1 to 10 groups per 100 monosaccharide units (specification page 5, lines 25-28).

Claim 8 limits Claim 1 in requiring that the cosmetic product is a skin care cosmetic, make-up cosmetic or hair conditioning cosmetic (specification page 6, lines 9-12).

Claim 9 limits Claim 1 in requiring that the cosmetic product is an emulsion, a beauty wash, a rouge, a manicure product or a hair lotion (specification page 6, lines 13-16).

Claim 10 limits Claim 1 in requiring that the solvent comprise at least one member selected from the group

consisting of a light isoparaffin, decamethylpentacyclosiloxane, octamethyltetracyclosiloxane, hexamethyltricyclosiloxane, dimethylpolysiloxane, methylphenylpolysiloxane and an organic perfluoro compound (specification page 24, lines 14-20).

Claim 11 limits Claim 1 in requiring that the cosmetic components additionally comprise at least one member selected from the group consisting of moisture-preserving agents, UV absorbers, beauty whitening agents, inorganic pigments, organic pigments, antioxidants, antiseptics, powders, pearly-lustering agents, dyestuffs, coloring agents, surfactants, thickening agents, stabilizers, dispersants, antiseptics, sterilizers, plasticizers, medicaments, fragrances, resins and pH regulators (specification page 15, lines 9-23).

Claim 12 limits Claim 10 in requiring that the solvent comprise a volatile hydrocarbon oil having a boiling point at normal pressure in the range from 60 to 160°C (specification page 24, lines 21-23).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The ground of rejection to be reviewed on appeal is the rejection of Claims 1, 4, 5 and 8-12 under 35 USC 103(a) as being unpatentable over Sunamoto et al in view of Ishiwatari et al.

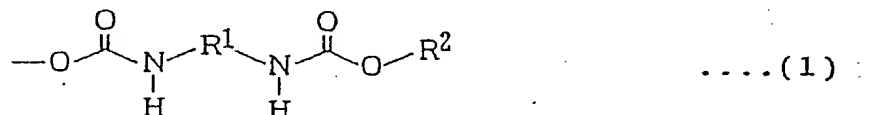
ARGUMENT

Rejection of Claims 1, 4, 5 and 8-12 Under 35 USC 103(a) as Being Unpatentable Over Sunamoto et al in View of Ishiwatari et al

The invention on appeal, as defined by the broadest claim, is directed to a cosmetic product which has a high moisture-retaining and film-forming ability, lamella formation facilitation, superior stabilization and low oily feel due to the incorporation of the claimed pullulan-cholesterol derivative. The cosmetic composition of the present invention

can be used in improving the conditions of hair and skin caused by drying, such as rough skin and reduced luster of the hair, and can provide moisturization of the skin and hair by retaining sufficient moisture therein while giving the hair and skin a superior touch and feel.

The cosmetic product of the present invention is made up of 99.999-50 wt.% of cosmetic components, a solvent containing at least one of a volatile oil and a volatile organic solvent and 0.001-50 wt.% of a pullulan-cholesterol derivative formed by substituting the hydroxyl groups of mono-saccharide units constituting the pullulan of the pullulan-cholesterol derivative, in a proportion of 0.01 to 20 groups per 100 monosaccharide units, by a radical represented by formula (1)



in which R¹ is a hydrocarbon group containing from 1-10 carbon atoms and R² is a cholesteryl group. The prior art cited by the Examiner does not disclose the presently claimed invention.

The Sunamoto et al reference is directed to polysaccharide-sterol derivatives which can be used as polysaccharide coatings for lipisomes and oil and water emulsions. In fact, this reference states that the primary application of the polysaccharide-sterol derivatives disclosed there is for coating lipisomes or oil droplets. Although this reference discloses that pullulan is suitable for use as a polysaccharide in the polysaccharide-sterol derivatives disclosed there, this reference has no disclosure with respect to the presence of a solvent containing at least one of a volatile oil and a volatile organic solvent or the use of the polysaccharide-sterol derivatives in a cosmetic composition.

The Ishiwatari et al reference discloses an oil-in-water emulsified composition and an oil-in-water emulsifying agent. The composition comprises an α-monoalkyl glyceryl ether, a wax

and a silicone oil. This reference further discloses that it is preferable that the composition contain a water-soluble high polymer which prevents the separation of the emulsion particles.

The Examiner states in the Office Action that it would have been obvious to use the pullulan-sterol compositions of Sunamoto et al in the cosmetic water-in-oil emulsions of Ishiwatari et al as pullulan-sterol compositions have previously been used in the formation of emulsions and liposomes and that the pullulan-steryl emulsions exhibited improved chemical and physical stabilities. Appellants once again respectfully request that the Examiner provide proof or support for this position, other than his opinion. Appellants respectfully submit that there is no teachings contained within the four corners of the Sunamoto et al and Ishiwatari et al references which would motivate one of ordinary skill in the art to combine these references in the manner suggested by the Examiner.

The object of the present invention is to provide a non-sticky coating film which is insusceptible to transcription onto surfaces coming into contact therewith and this is accomplished through the incorporation of the claimed pullulan-sterol derivative. This effect is shown in the Examples and Comparative Examples contained in the present specification.

Table 1 of the present specification shows experimental results of transcription tests of coating films. Examples 1 to 6 use specific polysaccharide-sterol derivatives according to the present invention while Comparative Examples 1 to 4 use polysaccharide-sterol derivatives outside the scope of the present invention or no polysaccharide-sterol derivative is incorporated. Namely, there are used TSP (tris-trimethylsiloxysilyl-propyl carbamate pullulan) in Comparative Example 1, pullulan in Comparative Example 2, no sterol derivative in Comparative Example 3 and polyvinyl alcohol for the place of a sterol derivative in Comparative Example 4.

All the compositions in the Comparative Examples correspond to the water-soluble high polymer indicated in Ishiwatari et al, wherein polyvinyl alcohol is recited therein on line 6 of column 11 as a water-soluble high polymer.

As seen in Table 1 of the present specification, it is clear that the effect of insusceptibility to transcription of a coating film of an emulsion composition onto surfaces contacted therewith is superior for the emulsion composition containing the specific polysaccharide-sterol derivative according to the present invention as compared with the emulsion composition in which a water-soluble high polymer of Ishiwatari et al is used. Similar results can be seen also in Table 6 of the present specification. In all the therein recited Examples and Comparative Examples (Examples 20 to 25 and Comparative Examples 9 to 12), the water-soluble high polymer used in Ishiwatari et al is employed. Here, it is seen that emulsion compositions containing the polysaccharide-sterol derivative according to the present invention (Examples 20 to 25) bring about superior results as compared with the emulsion compositions not having the polysaccharide-sterol derivative according to the present invention (Comparative Examples 9 to 12).

As discussed above, the cosmetic product of the present invention has unexpectedly improved properties with respect to insusceptibility to transcription of an applied layer or coating thereof onto surfaces contacted therewith. Sunamoto et al and Ishiwatari et al contain no motivation that would suggest to one of ordinary skill in the art to combine these references in the manner suggested by the Examiner. Moreover, even if they were properly combinable, the evidence of unobviousness in the presently claimed invention is more than sufficient to rebut any proper showing of prima facie obviousness under 35 USC 103(a).

CONCLUSION

For the reasons advanced above, it is respectfully submitted that the Examiner's rejection of the currently pending claims clearly are in error and should be reversed. Favorable consideration is respectfully solicited.

Respectfully submitted,


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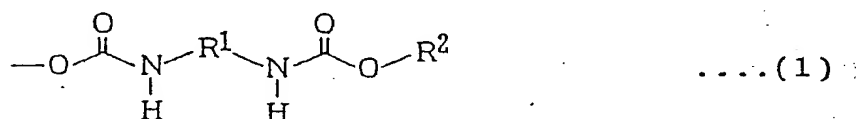
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Encl: Claims Appendix
Evidence Appendix
Related Proceedings Appendix
Postal Card

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CLAIMS APPENDIX

1. A cosmetic product comprising 99.999-50 wt.% of cosmetic components, a solvent containing at least one of a volatile oil and a volatile organic solvent and 0.001-50 wt.% of a pullulan-cholesterol derivative formed by substituting the hydroxyl groups of mono-saccharide units constituting the pullulan of the pullulan-cholesterol derivative, in a proportion of 0.01 to 20 groups per 100 monosaccharide units, by a radical represented by the formula (1)



in which R¹ denotes a hydrocarbon group containing 1-10 carbon atoms and R² represents a cholesteryl group.

2. and 3. (Canceled)

4. The cosmetic product as claimed in claim 1, wherein the proportion of cholesteryl groups introduced by substitution for the hydroxyl groups of the monosaccharide units of the pullulan is 0.05-15 groups per 100 monosaccharide units.

5. The cosmetic product as claimed in claim 1, wherein the proportion of cholesteryl groups introduced by substitution for the hydroxyl groups of the monosaccharide units of the pullulan is 0.1-10 groups per 100 monosaccharide units.

6. and 7. (Canceled)

8. The cosmetic product as claimed in claim 1, wherein the cosmetic product is a skin care cosmetic, make-up cosmetic or hair conditioning cosmetic.

9. The cosmetic product as claimed in claim 1, wherein the cosmetic product is an emulsion, a beauty wash, a rouge, a manicure product or a hair lotion.

10. The cosmetic product as claimed in Claim 1, wherein said solvent comprises at least one member selected from the group consisting of a light isoparaffin, decamethylpentacyclosiloxane, octamethyltetracyclosiloxane, hexamethyltricyclosiloxane, dimethylpolysiloxane, methylphenylpolysiloxane, an organic perfluoro compound.

11. The cosmetic product as claimed in Claim 1, wherein said cosmetic components additionally comprise at least one member selected from the group consisting of moisture-preserving agents, UV absorbers, beauty whitening agents, inorganic pigments, organic pigments, antioxidants, antiseptics, powders, pearly-lustering agents, dyestuffs, coloring agents, surfactants, thickening agents, stabilizers, dispersants, antiseptics, sterilizers, plasticizers, medicaments, fragrances, resins and pH regulators.

12. The cosmetic product as claimed in Claim 10, wherein the solvent comprises a volatile hydrocarbon oil having a boiling point at normal pressure in the range from 60 to 160°C.

EVIDENCE APPENDIX

There is no evidence in the present application submitted pursuant to 37 CFR 1.130, 1.131 or 1.132.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings to the present application.